

ABSTRACT OF THE DISCLOSURE

The present invention provides a sound signal processing function comprising a plurality of kinds of sound signal processing with the same arrangement of microphones that does not require replacement of the microphones or the sound signal processing part regardless of the application or the sound signal processing function.

The present invention uses an apparatus having a signal processing function such as a personal computer as the platform. An array section includes a plurality of microphones arranged in the X and Y axis directions. A received sound signal from each direction is subjected to a delay process by a delay unit, a subtraction process by subtractors 121 and 122, so as to obtain a received sound signal with a unidirectional pattern to the direction of the front of the apparatus and a received sound signal with a bidirectional pattern to the directions orthogonal thereto. In the case where the sound source is not in the direction of the front, a correction process to direct the sound source to the front is performed by a delay unit, a subtracter and adjustment of the gain amount. The directional sound signal calculating part, the sound source direction detecting part, and the noise suppressing part have a logic necessary to implement various functions using the uni/bidirectivity pattern signal as the input.